

Date: Mon, 1 Nov 93 04:30:13 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V93 #96
To: Ham-Ant

Ham-Ant Digest Mon, 1 Nov 93 Volume 93 : Issue 96

Today's Topics:

 6m antenna plans
 Coax termination blues.
 J-Pole lobe (radiation pattern)
 stubby HT antenna (2 msgs)
 Wire Size question (2 msgs)

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sun, 31 Oct 1993 04:25:00 GMT
From: swrinde!cs.utexas.edu!math.ohio-state.edu!cyber2.cyberstore.ca!
nntp.cs.ubc.ca!unixg.ubc.ca!acs.ucalgary.ca!cpssc.ucalgary.ca!ajfcal!
lhaven.UUmh.Ab.Ca!dreamer@network.ucsd.edu
Subject: 6m antenna plans
To: ham-ant@ucsd.edu

I'm looking for plans of simple homebrew 6m vertical and horizontal antennas.
More on the vertical ones. I'm planning to add 6m coverage to a packet BBS.

Since I have two copper cactus's already....something along these lines would
probably be good, except I need the relationships used so I can scale the
design up and down. I'd be interested in other antenna designs for VHF/UHF use
involving copper pipe.

--

"Just a Crazy Engineer with an Amiga and an HP48sx" - The Dreamer
Email: dreamer@lhaven.uumh.ab.ca or "Lawrence Chen" @ 1:134/3002

Date: 30 Oct 93 23:18:13 -0600
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!
vixen.cso.uiuc.edu!moe.ksu.ksu.edu!engr.uark.edu!news.ualr.edu!eieio.ualr.edu!
gdm@network.ucsd.edu
Subject: J-Pole lobe (radiation pattern)
To: ham-ant@ucsd.edu

Dana Myers (myers@cypress.West.Sun.COM) wrote:

: In article 17175@btree.uucp, hale@btree.uucp (Bob Hale) writes:
: >In article <2ah8lvINN6rl@abyss.West.Sun.COM>
: myers@cypress.West.Sun.COM writes:
: >>In article 26432@pony.Ingres.COM, garys@Ingres.COM (Gary Swiger) writes:
: >>>I have a couple of questions concerning j-pole antennas:
: >>>
: >>>1) How directional are they?
: >>>2) What is their radiation pattern (lobe)?
: >>>
: >>
: >>Ideally, a J-pole is an end-fed vertical half wave monopole.
: >>The bottom of the J is a quarter-wave balanced transmission line
: >>with an impedance of around 200 ohms, used to transform the rather
: >>high impedance of the end-fed half-wave to something around
: >>50 ohms.
: >
: >
: >A J-pole antenna consists of more than one driven element spaced
: >closely to a reflector (the pole). A J antenna is a half wave
: >long dipole fed by a 1/4 wave long matching section at the bottom.

: Really? More than one driven element spaced closely to the pole?
: A J-pole is a half-wave long *dipole*? Are you confused?

: The only thing you are correct on is the quarter-wave matching section.

: Maybe you are talking about what is known as a 4 pole antenna array?

: >The pattern from a J-pole is adjustable by moving the elements
: >around the pole. If all of the elements are on the same side
: >of the pole then the pattern is cardioid and has about a 3 DB gain
: >over the omni case. The omni case is obtained by spacing the
: >elements equally around the pole; if you have 4 elements then
: >they would be spaced every 90 degrees. The pattern won't be
: >_exactly_ omni but it will be extremely close. In the cardioid
: >case the main lobe is to the side of the pole where the elements
: >are mounted.

: Oh! I thought you meant 4-pole, where 4 dipolar radiators are

: attached to a support. The ones I've seen all use folded dipoles...
: The J-pole, every time I've seen a reference to it, is an end-fed
: half-wave monopole, like I said in my first post.

: >The pattern from a J antenna is that of a half wave dipole;
: >e.g., omnidirectional. The fact that it is being fed from one
: >end has nothing to do with its radiation pattern or gain. Since
: >it is a half wave dipole it has no gain relative to a dipole,
: >even though the feed system adds to its length.

: Well, yeah, this part is correct with respect to J-poles...

: >The above assumes that correct feeding techniques are applied.
: >If some portion of the structure that isn't supposed to radiate
: >does radiate then the pattern can do lots of bizarre things.

: ...and this part is correct with respect to 4 poles....

I think you guys are all confused in your own special ways.
In the argument over what constitutes a J antenna or a J-pole antenna,
someone in the above pileup gave a description of a popular commercial-band
antenna manufactured by Decibel Products. This is neither a J nor a J-pole.
It is a collinear array. Their 150-MHz four-bay version
is called the DB-224. Note that each antenna in the array is called
a "bay" and that the support structure for the bays is a "mast."
A "pole" is a mathematical concept that may or may not correspond
to a physical part of an antenna.

My trusty old ARRL antenna book gives a description of what people
have been calling a J-pole, but the book calls it a J, and makes no
mention of a J-pole whatsoever. Maybe a J-pole is a J with a zero in
the denominator of its transfer function. ;-)

: * This Extra supports the abolition of the 13 and 20 WPM tests *

Oh yeah? Well, this Extra thinks that that Extra is full of baloney!
[And that's all I have to say in the matter. Further code vs. nocode
debate is not invited and will be redirected to the bit-bucket.]

73 and good luck in the contest.

K5DH

- - - - Doug Mauldin - - - - University of Arkansas at Little Rock - -
gdm@eieio.ualr.edu Graduate Institute of Technology
gdmauldin@ualr.edu Department of Electronics and Instrumentation
- standard disclaimers apply - - - - -

: -Brant
:

i don't know brant, but if it works as well as the stubby that came with the icom ic-24at and the one that comes with the yaesu ft-530 you will be delighted to know that they make excellent DUMMY LOADS... both icom and yaesu will give you a REAL dual band rubber duck if you complain...

mitch, wa4osr
fmitch@netcom.com

--

fmitch@netcom.com
Felton Mitchell, WA4OSR in Mobile, Alabama USA
co-sysop for W4IAX bbs running fbb ... sysop for WA4OSR DXCluster in Mobile..

Date: Sun, 31 Oct 1993 13:10:18 GMT
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!math.ohio-state.edu!cyber2.cyberstore.ca!nwnexus!jhgrud!eskimo!mann@network.ucsd.edu
Subject: Wire Size question
To: ham-ant@ucsd.edu

In article <1993Oct31.011053.1@aurora.alaska.edu>, fsrla@aurora.alaska.edu writes:
> In the 1982 ARRL Antenna book htthere(
> is a 2 element quad antenna for 2Meters
> on page 11-13 (it may be in new editions
> but this is nthe most recent our Library
> has.)
> My question is this: It calls for #8
> aluminum wire but the only wire that
> is aluminum I can find here in town is #9.

I built that antenna using 1/4 inch copper water pipe and 1/4" elbows. Works like a dream. I prefer the copper pipe because I found it easier to work with, very good mechanically and I'm kind of prejudiced in favor of copper over aluminum for R.F. work.

My \$0.02 worth.
--

Tom "Old" Mann KD9NL/7 Kirkland, Wash.

Date: Mon, 1 Nov 1993 04:07:56 GMT
From: pa.dec.com!nntpd2.cxo.dec.com!nuts2u.enet.dec.com!little@decwrl.dec.com

Subject: Wire Size question
To: ham-ant@ucsd.edu

fsrla@aurora.alaska.edu writes:

>My question is this: It calls for #8
>aluminum wire but the only wire that
>is aluminum I can find here in town is #9.
>Will this change anything? What would I have
>to do to correct for this size wire? Should, or
>should it not be insulated (the stuff I found had
>a thin green plastic on it.)

IMHO the difference between #8 and #9 is insignificant for a design like that. On the other hand, insulated versus bare wire will make a difference. Use bare #8 copper if you can't find the bare aluminum and build an X frame to support the elements.

73,
Todd
N9MWB

End of Ham-Ant Digest V93 #96

